## AMENDMENTS TO THE CLAIMS

1. (Currently Amended) A method comprising the steps of:

digitally forming at least first and second composite signals each including information represented by each of at least two signals, wherein said at least two signals have substantially the same frequency;

digitally pre-distorting the at least first and second composite signals;

amplifying the pre-distorted first composite signal in a first amplifier to produce an amplified first composite signal;

amplifying the pre-distorted second composite signal in a second amplifier to produce an amplified second composite signal; and

forming an amplified version of each of the at least two signals as a function of at least the amplified first and second composite signals.

2. (Original) The method of claim 1, wherein:

the at least two signals comprise first and second diversity-encoded signals, the first and second diversity-encoded signal representing information represented by a first signal; and

the amplified versions of each of the at least two signals comprise an amplified first diversity-encoded signal and an amplified second diversity-encoded signal.

3. (Original) The method of claim 2, wherein:

the first composite signal is a function of a comb9ination of the first diversity-encoded signal with a phase-shifted version of the second diversity-encoded signal; and

the second composite signal is a function of a combination of the second diversity-encoded signal with a phase-shifted version of the first diversity-encoded signal.

4. (Original) The method of claim 2, wherein:

the first composite signal is a function of a sum of the first diversity-encoded signal and of the second diversity-encoded signal; and

the second composite signal is a function of a difference between the first diversity-encoded signal and the second diversity-encoded signal.

5. (Original) The method of claim 1, wherein amplified versions of each of the at least two signals comprise amplified phase-shifted versions of the at least two signals.

6. (Original) The method of claim 1, further comprising the steps of:

transmitting an amplified version of one of the at least two signals over a first antenna; and;

transmitting an amplified version of another of the at least two signals over a second antenna.

7. (Currently Amended) A transmitter comprising:

a digital first device for forming at least first and second composite signals each including information represented by each of at least two signals, wherein said at least two signals have substantially the same frequency, the digital first device including a digital predistorter having an input coupled to the digital first device, the digital predistorter for digitally pre-distorting the first and second composite signals;

a first amplifier having an input coupled to the digital predistorter, the first amplifier amplifying the pre-distorted first composite signals to produce an amplified first composite signal;

a second amplifier having an input coupled to the digital predistorter, the second amplifier amplifying the pre-distorted second composite signal to produce an amplified second composite signal; and

a second device having a first input coupled to an output of the first amplifier and a second input coupled to an output of the second amplifier, the second device forming an amplified version of each of the at least two signals as a function of at least the amplified first and second composite signals.

8. (Original) The transmitter of claim 7, wherein a radio comprises:

the digital first device; and

an RF section having an input coupled to the digital predistorter and an output coupled to at least one of the two amplifiers, the RF section for modulating the first and second composite signals onto RF signals.

9. (Original) The transmitter of claim 7, wherein:

the digital first device further comprises:

a first pre-amplifier hybrid combiner for forming the first composite signals; and

a second pre-amplifier hybrid combiner for forming the second composite signal;

the digital predistorter comprises:

a first digital predistorter for digitally pre-distorting the first composite signal; and

a second digital predistorter for digitally pre-distorting the second composite signal;

a first radio including:

the first pre-amplifier hybrid combiner;

the first digital predistorter; and

a first RF second having an input coupled to the first digital predistorter and an output coupled to the first amplifier, the RF section for modulating the first composite signal onto a first RF signal; and

a second radio including:

the second pre-amplifier hybrid combiner;

the second digital predistorter; and

a second RF section having an input coupled to the digital predistorter and an output coupled to the second amplifier, the RF section for modulating the second composite signal onto a second RF signal.

10. (Original) The transmitter of claim 7, wherein the second device comprises a 90° hybrid combiner implemented in analog circuitry.

11. (Currently Amended) An apparatus comprising:

at least one antenna; and

a transmitter coupled to at least one of the at least one antennas, the transmitter comprising;

a digital first device for forming at least first and second composite signals including information represented by each of at least two signals, wherein said at least two signals have substantially the same frequency, the digital first device including a digital predistorter having an input coupled to the digital first device, the digital predistorter for digitally pre-distorting the first and second composite signals;

a first amplifier having an input coupled to the digital predistorter, the first amplifier amplifying the pre-distorted first composite signals to produce an amplified first composite signal;

a second amplifier having an input coupled to the digital predistorter, the second amplifier amplifying the pre-distorted second composite signal to produce an amplified second composite signal; and

a second device having a first input coupled to an output of the first amplifier and a second input coupled to an output of the second amplifier, the second device forming an amplified version of each of the at least two signals as a function of at least the amplified first and second composite signals.

12. (Original) The apparatus of claim 11, wherein a radio comprises:

the digital first device; and

an RF section having an input coupled to the digital predistorter and an output coupled to at least one of the two amplifiers, the RF section for modulating the first and second composite signals onto RF signals.

13. (Original) The apparatus of claim 11, wherein:

the digital first device further comprises:

a first pre-amplifier hybrid combiner for forming the first composite signal; and

a second pre-amplifier hybrid combiner for forming the second composite signal;

the digital predistorter comprises:

a first digital predistorter for digitally pre-distorting the first composite signal; and

a second digital predistorter for digitally pre-distorting the second composite signal;

a first radio including:

the first pre-amplifier hybrid combiner;

the first digital predistorter; and

a first RF section having an input coupled to the first digital predistorter and an output coupled to the first amplifier, the RF section for modulating the first composite signal onto a first RF signal; and

a second radio including:

the second pre-amplifier hybrid combiner;

the second digital predistorter; and

a second RF section having an input coupled to the digital predistorter and an output coupled to the second amplifier, the RF section for modulating the second composite signal onto a second RF signal.

14. (Original) The apparatus of claim 11, wherein the second device comprises a 90° hybrid combiner implemented in analog circuitry.

15. (Original) The apparatus of claim 11, wherein apparatus includes at least two antennas and the transmitter is coupled to at least two of the antennas.

16. (Original) The apparatus of claim 11, wherein apparatus further comprises a receiver coupled to at least one of the antennas.